holes of which are shewn at the bottom of fig. 7, to the top bar of the frame in which the going train of the clock is contained.

Fig. 6 is an outside, and fig. 7 an inside, view of one of the agate holes for the pallat axis. The agate is fixed in its circular mounting *h*, by the three screws shewn in fig. 6, the hole in which the agate is received allowing room for its adjustment; *i i*, fig. 7, is a vertical slide, carrying the pallat axis and its hole: it is suspended from the adjusting screw *j*, and, after being accurately adjusted, is fixed by the two side-binding screws *k k*.

No. III.

REMONTOIRE ESCAPEMENT.

The SILVER ISIS MEDAL *was presented to Mr. A. P.* WALSH, *No.* 6 *Great George Street, Euston Square, for his Remontoire Escapement; a Model of which has been placed in the Society's Repository.*

THE object of all remontoire, or wind-up escapements, is to insure a perfect equality of vibration in the balance, by preventing it from being affected by any irregularity that may occur, either in the mainspring or in the train. This is done by interposing between the train or escape-wheel and the balance, an impulse-spring, so contrived that it shall be wound up by the train to exactly the same degree at each vibration; and then, being set free, shall give impulse to the balance. The peculiar merit of Mr. Walsh's escapement is its great simplicity; and as, from the com-

plexity of parts in such escapements as have hitherto been made, the principal objections to their use arise, namely, their expense and liability to derangement, the Society consider that they are benefiting the public in introducing Mr. Walsh's invention to the notice of the profession.

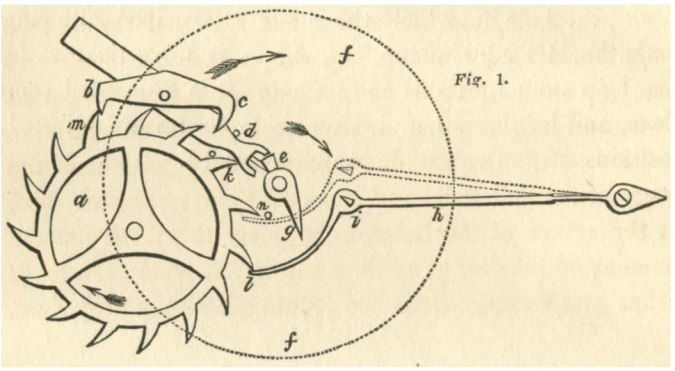

Fig. 1.

a is the escape-wheel, *b c* the lockings fixed on the lever *d*, the motion of which is limited by two stop-pins, one on each side; the end of the lever is formed into a fork, each prong of which is alternately acted on by the unlocking pallat *e*, which is placed on the axis of the balance *f*, figs. 1, 2, and 3. *h* is the impulse-spring, which, by means of its triangular tooth *i*, gives motion to a longer pallat *g*, also placed on the axis of the balance. *j*, fig. 3, is a safety-point fixed on the lever beneath the fork, there being a notch in the axis of the balance to allow it to pass only at the right time.

It is a remontoire escapement, the object of which is to remove from the balance all effects of the irregularities that may occur in the mainspring, or the train, the train not being allowed to act on the balance; but, instead, it is made to wind up a separate impulse-spring exactly

the same distance at every vibration: it therefore gives exactly the same degree of impulse to each vibration of the balance.

In fig. 1, the pendulum-spring has brought back the balance, and its momentum is carrying it on in the direction of the arrow. The pallat *e* has moved the fork lever *d*, and is leaving it; this action has liberated the tooth *k* from the locking *c* with a long drop; and this long move has, by a tooth *l*, carried back the spring *h* from its dotted place, and left it resting on that tooth (in the two extreme positions of the spring *h*, its tooth *i* only just clears the range of the pallat *g*), and the pallet *g* is so placed, that, on the return of the balance, it passes the tooth *i* at the moment of unlocking, as shewn in fig. 2, where the tooth *m* has just escaped from the locking *b* with a very short

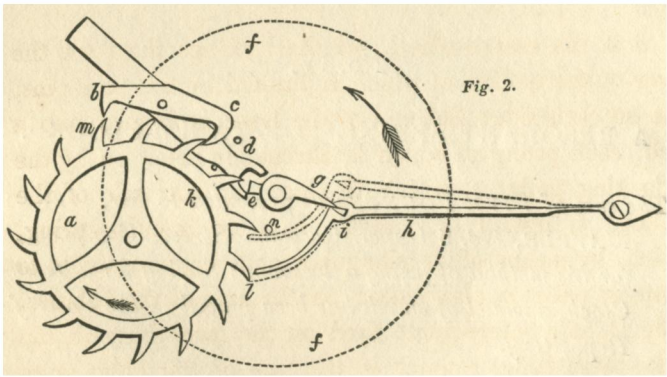

Fig. 2.

drop; this short move has also made the tooth *l* pass the end of the spring *h*, and let it go; its tooth *i*, therefore, acts with all its force against the pallat *g*, as here shewn, and continues to give the impulse to the balance till the spring *h* is nearly stopped by the next tooth of the escape-

wheel, near which is placed a guard-pin *n* to assist in bearing the drop of the spring *h*.

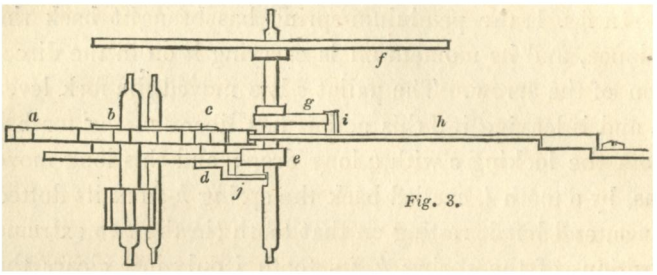

Fig. 3.

Fig. 3, is an elevation to shew the position of the different parts.

No. IV.

A RESONANT SPRING FOR TABLE-CLOCKS.

The sum of FIVE POUNDS *was presented to Mr.* HENRY MAPPLE, *No.* 6 *Upper Rosomon Street, Clerkenwell, for his method of fixing a Resonant Spring for a Table-Clock, a model of which has been placed in the Society's Repository.*

IT is common in table-clocks, in order to get a deeper sound than is given by such bells as can conveniently be attached to them, to substitute for a bell a resonant spiral steel spring, which, when well made, will give a deep-toned musical vibration when struck. In the French clocks the resonant spring is thin, and is fixed to the